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The DoD Gateway Information System:
How the Defense Technical Information Center
Plans to Broaden the
Availability of Information Within DoD

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o Planners, managers, scientists, engineers and others throughout DoD need information from a variety of sources.

o The old definitions of information types such as technical data, financial data, scientific and technical information are no longer useful.

o Modern technology has changed the way information may be collected, stored, announced and disseminated.

o Online access to multiple databases can provide single-point reference to a wide array of information.

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19. ABSTRACT (continued)

o The DoD Gateway Information System is DoD's initiative toward improved information transfer within the Research, Development, Test & Engineering (RDT&E) Community.

Defense

The DoD Gateway Information System:

How the Defense Technical Information

Center Plans to Broaden the Availability

of Information Within DoD.

HIGHLIGHTS

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o The DoD Gateway Information System is DoD's initiative toward improved

information transfer within the Research, Development, Test & Engineering

(RDT&E) Community.

When you need information do you really care about where it comes from as

long as it's valid? Does it matter to you if "technical data" you need is

provided from a "scientific information" database -- or if "financial information" is drawn from a "manpower and training information" system? If you are like most researchers/project managers, your priorities are to get reliable information, from a convenient source, in a timely manner, without spending much money for it. Unfortunately, DoD's system has been built to protect information, not to provide it conveniently.

Much has been written about the U.S. national system that controls classified information. That system inhibits access to sensitive information via a complicated set of laws, regulations, rules and procedures. A similar set of practices, however, has existed since WWII that restricts the flow of unclassified information. This article focuses on a big step DoD has taken to improve the flow and control of unclassified information.

Within DoD, information is a by-product of various missions. Over the years, each mission area has established its own data or information system in relative isolation from others. DoD provides centralized document and database services for that scientific and technical information which is produced by DoD laboratories and by DoD contractors through the Defense Technical Information Center (DTIC) in Alexandria, VA. DTIC acquires, stores, and announces this information to DoD's research and development community and reproduces it for use as needed.

DTIC is a highly specialized, automated, information source that has been in business since WWII. Its information, however, is limited to scientific and technical papers and to management information concerning ongoing and planned DoD research and development efforts. If you are a contractor looking for

the latest copy of a military specification or standard, don't look to DTIC; instead, look to the Navy Forms and Publications Office in Philadelphia, PA. If you need the latest revision to a drawing so that you can bid on a contract, you'd better check with the design activity for the basic weapons system (whoever that is). If you are a DoD weapons system manager and you need financial information on a weapons system, you may need to contact any one of the several DoD or military department budget and accounting offices. If you want contract status information, you'd better check with the contract administration regional office. "Lots of luck" if you need specialized information on reliability, spare parts provisioning, training manuals, transportation, handling, etc.

So, what's the problem? There's a wealth of unclassified information "out there" on any topic you can imagine. All you need to do is seek it out. Financial people are reasonably well served by their information system; engineers and scientists have their captive databases; the inventory managers have piles of print-outs for the hardware they control. Each community has the information it needs to perform its own job. Or, does it?

At DTIC, we don't believe that our customers, the DoD RDT&E community, are being served as well as modern technology will permit. To provide that community with single-point access to a wide variety of information sources, we're testing a new prototype information system called the DoD Gateway Information System (DGIS). The concept is simple and straightforward.

From a single terminal tied into DGIS, our test community can access a list of over fifty federal and commercial databases. Currently, these

databases include those maintained for DoD by DTIC as well as databases managed by the National Technical Information Service (NTIS), the National Aeronautics and Space Administration (NASA) the Department of Energy (DOE), DIALOG, and others. As the system becomes operational, the number of available databases is expected to grow substantially as required.

Our goal is to eliminate the need to learn separate search languages and search methods for each database accessed. Currently, a searcher must know the search language method for each database. When the single-point access system is fully operational, the searcher will need knowledge of only one searching system to access all databases accessible by DGIS. Translation tables within the computer will do the rest. DGIS already has the capability of merging the results from several databases into a private file that the searcher may format "at will." Post processing routines allow the searcher to eliminate redundancies from several databases and to perform analysis on data from muliple sources. The information may be displayed graphically if appropriate.

DGIS does not bypass controls inherent in any of the databases. If a particular database manager charges for information, those charges will be billed to the recipient. If there are limitations on sensitive information, those limitations will be imposed upon the searcher. If only registered users can access a database, then the DGIS will so inform the searcher, along with instructions on how to become registered. DGIS in no way undermines the fiscal or usage controls unique to each database it accesses.

At this time, DGIS is undergoing prototyping and handles only unclassified data. Plans call for the system to be operational in about one year and to become certified for classified data handling within the next three years. DGIS also has a "mailbox" capability as well as associated human "tutoring" help as part of the operational system.

There is a lot more to the DGIS than described here and it is growing in scope and acceptance within DoD as this article goes to print. The implications of "Gateway" may be as profound as was the switch from "hard copy" document to "online" information. Information centers will no longer need to physically hold these documents to which they supply access. Rather, they will switch users over to the document source. No longer will artificial and inhibiting definitions such as technical data, scientific and technical data, reliability data, financial data, etc., prevent needed information from flowing to where it is needed. Even unsophisticated researchers will be able to access information from a wide variety of sources. No longer will managers be locked away from financial databases, or scientists from spare parts information because of the unique search language of each database. Information will be handled as the tangible commodity it is, rather than as the captive servant of a discrete mission area.

Putting the DGIS together has required the talents of many organizations and special people. DTIC is the DoD program manager; Lawrence Livermore National Laboratory is the primary contractor. The Washington Headquarters Services, Directorate of Computer and Office Automation Resources, has been a partner in this effort. The Air Force, Navy, and Army have provided funding. The Logistics Management Institute, Bolt Beranek and Newman, Inc., Control Data

Corporation, and others have made major contributions to the program. A classsified version of DGIS may soon be developed for use by the Strategic Defense Initiatives Office.

DTIC sees the "Gateway" as the dominate information transfer system of the next ten to fifteen years. As technology advances, we hope to take advantage of new techniques that will bypass some of the communications and security problems inherent in Gateway. It may be possible to place DTIC's massive secure database on a single small memory device, replicate it, then mail that updated database to our customers. Such a system would put massive amounts of data at the fingertips of our R&D community. DTIC plans to exploit Gateway and other technologies to ensure that our user community gets the information they need, when they need it!